IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Patent Application of

Manuel Angel Albarran Moyo et al.

Application No.: 10/571,075

Filed: September 13, 2007

For: A Data Structure for an Electronic Document and Related Methods

Group Art Unit: 2166

Examiner: PHAM, Khanh B.

Confirmation No.: 2399

REPLY BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a Reply Brief under Rule 41.41 (37 C.F.R) in response to the Examiner's Answer of September 28, 2010 (the "Examiner's Answer" or the "Answer"). In Section 10, the Answer contains a response to some of the arguments made in Appellant's brief. Appellant now responds to the Examiner's Answer as follows.

Status of Claims

The status of the claims remains unchanged by the Examiner's Answer.

Claims 1-14 were withdrawn under a previous Restriction Requirement and were subsequently cancelled without prejudice or disclaimer. Claims 15-38 are pending in the application and stand finally rejected. Accordingly, Appellant appeals from the final rejection of claims 15-38.

Grounds of Rejection to be Reviewed on Appeal

The grounds of rejection to be reviewed on appeal are unchanged by the Examiner's Answer. The Answer maintains the following grounds of rejection.

(1) Claim 32 was rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

(2) Claims 15-22 and 31-38 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,623,713 to Lapstun et al. (hereinafter Lapstun).

(3) Claims 23-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lapstun, in view of U.S. Patent No. 7,653,876 to Ethier et al. (hereinafter Ethier).

Accordingly, Appellant hereby requests review of each of these grounds of rejection in the present appeal.

Argument

(1) Claim 32 is directed to statutory subject matter under 35 U.S.C. § 101:

Claim 32:

Claim 32 recites:

> A system for producing an electronic document, the system comprising:
> ***means for receiving the content of the electronic document***,
> ***means for receiving data defining a pattern of positional markings*** allocated to at least a portion of the document; and
> ***means for generating a data structure defining the electronic document*** which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern.

In the final Office Action of April 19, 2010 (hereinafter, final Office Action), claim 32 was rejected because the claimed invention is allegedly directed to non-statutory subject matter. Specifically, the final Office Action states the following:

> Claim 32 lacks the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 U.S.C. 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be composition of matter. . . . ***They are, at best, functional descriptive material per se***.

(final Office Action, p. 2) (emphasis added).

Further, the Examiner's Answer argues, "the specification at page 2 and 3 does not teach a 'processing apparatus' as quoted by Appellant, and page 19, lines 19-31 does not disclose 'a printer' as quoted by Appellant." (Examiner's Answer, p. 12). Appellant respectfully disagrees.

First, Appellant respectfully asserts that points out that there exists sufficient support within Appellant's originally filed specification for the subject matter of claim 32. Appellant had previously pointed out that support for the recitation "means for receiving the content of

the electronic document" may be found in the specification as only one of potentially many embodiments, at, for example, page 2, line 28 through page 3, line 4 in which it is disclosed that, "it may be simpler . . . to transfer the electronic document defined by the data structure to various locations between ***processing apparatus***, etc., to electronically process the document and the like." Further support for this subject matter may be found at; for example, page 7, lines 11-13 in which it is disclosed that "[t]he content receiving means may include ***a graphical user interface***" that "may present to a user an image of a document ***on a screen*** to which a user can add content." (Emphasis added). Thus, the "means for receiving the content of the electronic document" of claim 32 may include a graphical user interface with a screen.

The Examiner's Answer then argues, "even if the 'processing apparatus' and 'a printer' are hardware, they are not utilized to perform the function as recited in the claims. Appellant respectfully disagrees. In light of Appellant's arguments presented above demonstrating the existence of a graphical user interface with a screen that performs these functions, this arguments may now no longer be valid. Therefore, Appellant respectfully asserts that because sufficient support within Appellant's originally filed specification exists for the recitation "means for receiving the content of the electronic document" within claim 32, the rejection under 35 U.S.C. § 101 should not be sustained.

Second, support for the recitations "means for receiving data defining a pattern of positional markings allocated to at least a portion of the document" of claim 32 also exists within Appellant's originally filed application. For example, the original specification discloses, "[t]he pattern receiving means may include a ***means for requesting pattern from a server or from a store of locally held pattern information***. The program may make this request once a user has indicated that the design of the document content is complete."

(Appellant's specification, p. 7, ll. 18-21). Further, the application discloses that, "the design of the content of the document is ***carried out on a PC*** using an application (Step 600) (Applicant's specification, p. 11, ll. 27-28) (emphasis added)," and that "allocated positions within the total pattern space are requested from, and allocated by, ***a pattern allocating server***." (Applicant's specification, p. 11, ll. 27-28) (emphasis added). Thus, clearly, the "means for receiving data defining a pattern of positional markings" may include, for example, the PC (personal computer comprising a processor and memory), which receives the allocated patterns from the pattern allocating server. Therefore, Appellant respectfully asserts that because sufficient support within Appellant's originally filed specification exists for the recitation "means for receiving data defining a pattern of positional markings" within claim 32, the rejection under 35 U.S.C. § 101 should not be sustained.

Third, support for the recitations "means for generating a data structure defining the electronic document" of claim 32 also exists within Appellant's originally filed application. For example, as similarly described above, the original specification discloses, "[t]he data structure may be generated by the program automatically once a user has indicated that the design of the content is complete." (Appellant's specification, p. 7, ll. 23-24). Further, the application discloses that, "the design of the content of the document is ***carried out on a PC*** using an application (Step 600) (Applicant's specification, p. 11, ll. 27-28) (emphasis added)," and that:

> Upon completion of the design of the document 100 a data structure . . . will have been created . . . compris[ing] a first portion which includes graphical information 802 defining the content of the document 100, and a second portion 804 which comprises a pattern area definition defining the sizes and positions of the pattern areas 107 on the document 100.

(Applicant's specification, p. 14, ll. 19-24).

Thus, clearly, the "means for generating a data structure defining the electronic document" may include, for example, the PC (personal computer comprising a processor and memory), which generates an electronic document. Therefore, Appellant respectfully asserts that because sufficient support within Appellant's originally filed specification exists for the recitation "means for generating a data structure defining the electronic document" within claim 32, the rejection under 35 U.S.C. § 101 should not be sustained.

(2) Claims 15-22 and 31-38 are patentable over *Lapstun*:

Claim 15:

Claim 15 recites:

> A computer program product for generating an electronic document, the computer program product comprising:
>
> a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising:
>
> computer usable program code configured to define the electronic document;
>
> in which the computer usable program code comprises first and second portions of data;
>
> ***in which the first portion of data defines the content of the electronic document and the second portion comprises data relating to a pattern of position identification markings*** such that, when the electronic document is printed, a pattern reading device is able to determine its position relative to the position identification markings; and
>
> in which the computer usable program code comprises ***a single data file with the first and second data portions being embedded within the data file***.

(Emphasis added).

In contrast, Lapstun does not teach or suggest the subject matter of claim 15. Generally, Lapstun teaches, "handwritten note taking and, more particularly, to a method and system for enabling handwritten note taking and retrieval." (Lapstun, col. 1, ll. 19-21). More specifically, Lapstun teaches a netpage system that "relies on the production of, and human

interaction with, netpages. These are ***pages of text, graphics and images printed on ordinary paper***, but which work like interactive web pages." (*Id.* at col. 7, ll. 21-24) (emphasis added).

> [A] printed netpage 1 can represent a interactive form which can be filled in by the user both physically, on the printed page, and "electronically", via communication between the pen and the netpage system. The example shows a "Request" form containing name and address fields and a submit button. The netpage consists of graphic data 2 printed using visible ink, and coded data 3 printed as a collection of tags 4 using invisible ink. ***The corresponding page description 5, stored on the netpage network, describes the individual elements of the netpage. In particular it describes the type and spatial extent (zone) of each interactive element (i.e. text field or button in the example)***, to allow the netpage system to correctly interpret input via the netpage.

(*Id.* at col. 7, ll. 44-51) (emphasis added).

However, Lapstun does not teach or suggest, "in which the first portion of data defines the content of the electronic document and the second portion comprises data relating to a pattern of position identification markings . . . in which the computer usable program code comprises ***a single data file with the first and second data portions being embedded within the data file***." (Claim 15) (emphasis added). The Examiner's Answer argues:

> Lapstun clearly teaches at Col. 14 lines 11-67 the **page instance** 830 (i.e. "**single data file**"), which consists of "a set of terminal element instance" and the "Page ID 50" ***encoded in tags***. Lapstun further teaches: "each page instance 830 describes a single unique printed netpage 1, and record the page ID 50 of the netpage" at Col. 14 lines 45-46.

(Examiner's Answer, p. 13) (emphasis added).

The Examiner's Answer further argues:

> Lapstun generates a page instance 830 ***which comprises graphic data and coded data*** before sending to the printer to output the paper document containing both data. Lapstun's page instance therefore corresponds to the claimed "single data file" with the first and second data portions being embedded within the data file as claimed.

(Examiner's Answer, p. 14) (emphasis added).

However, Appellant disagrees and asserts that this portion of Lapstun (i.e., col. 14, ll. 11-67) teaches only aspects of the document, and is silent regarding a second portion of data

comprising data relating to a pattern of position identification markings embedded with data defining content of an electronic document in the same data file. Column 14, lines 11-67 of Lapstun generally teaches "document and page descriptions." (Lapstun, col. 14, ll. 8-10).

Throughout column 14, lines 11-67, Lapstun simply teaches the graphic data (Fig. 1, element 2) of the netpage printed using visible ink and does not teach data relating to a pattern of position identification markings. This is clear from the teachings of a "document 836," a "formatted document 834," a "document instance 831," a "page instance 830," and a "terminal elements 839." (Lapstun, col. 14, ll. 11-67). Specifically, Lapstun teaches the following:

> A ***formatted document 834 consists of a set of formatted page descriptions 5, each of which consists of a set of formatted terminal elements 835***. Each formatted element has a spatial extent or zone 58 on the page. This defines the active area of input elements such as hyperlinks and input fields.
>
> ***A document instance 831 . . . consists of a set of page instances 830, each of which corresponds to a page description 5 of the formatted document***. Each page instance 830 describes a single unique printed netpage 1, and ***records the page ID 50*** of the netpage.
>
> A page instance consists of a set of terminal element instances 832.
>
> . . .
>
> ***A terminal element can be a static element 843, a hyperlink element 844, a field element 845 or a page server command element 846***, as shown in FIG. 27. A static element 843 can be ***a style element 847 with an associated style object 854, a textflow element 848 with an associated styled text object 855, an image element 849 with an associated image element 856, a graphic element 850 with an associated graphic object 857, a video clip element 851 with an associated video clip object 858, an audio clip element 852 with an associated audio clip object 859, or a script element 853 with an associated script object 860***, as shown in FIG. 28.

(Lapstun, col. 14, ll. 36-67) (emphasis added).

Clearly, this portion of Lapstun simply describes the physical look of a printed netpage. Within the above-cited portion of Lapstun, Appellant points out, specifically, that Lapstun teaches, "[a] document instance 831 . . . consists of a set of page instances 830, ***each of which corresponds to a page description 5 of the formatted document***." This reference to

Fig. 1, element 5 of Lapstun is clearly directed to ***only*** element 2 of Fig. 1 and not elements 3 or 4 of Fig. 1.

Further, with regard to the teaching of recording the page ID 50 within the above-cited portion of Lapstun, Lapstun, in contrast, particularly teaches that the page ID is assigned to "allow input through otherwise identical pages to be distinguished, "and "has sufficient precision to distinguish between a very large number of netpages." (Lapstun, col. 9, ll. 57-60) (*See also*, Fig, 25, element 50, depicting element 50 as a part of the page instance and not a tag, position mark, etc.). In other words, the page ID 50 of Lapstun simply identifies a particular page within a set of pages, and does not comprise data relating to a pattern of position identification markings.

Even still further, the Examiner's Answer argues, "each netpage is the printed copy of the page instance 830, and includes [a] first portion (element 2 of Fig. 1) of data defin[ing] content of the document and [a] second portion (element 3,4 of Fig. 1) compris[ing] data relating to a pattern of position identification markings as claimed. (Examiner's Answer, p. 13). However, as demonstrated above, although Lapstun does depict a single printed document comprising content elements and coded data, it does not follow that Lapstun teaches these two elements are embedded within a single data file. This subject matter is simply not taught or suggested by Lapstun.

Further, even if, *arguendo*, the cited portions of Lapstun teach graphic data and coded data, Lapstun still fails to teach or suggest how the graphic data and coded data are electronically stored or otherwise brought together within a single data file. Lapstun simply teaches the following:

> As illustrated in FIG. 1, a ***printed netpage*** 1 can represent a interactive form which can be filled in by the user both physically, on the printed page, and "electronically", via communication between the pen and the netpage system.

> The example shows a "Request" form containing name and address fields and a submit button. ***The netpage consists of graphic data 2 printed using visible ink, and coded data 3 printed as a collection of tags 4 using invisible ink. The corresponding page description 5, stored on the netpage network, describes the individual elements of the netpage. In particular it describes the type and spatial extent (zone) of each interactive element (i.e. text field or button in the example), to allow the netpage system to correctly interpret input via the netpage***. The submit button 6, for example, has a zone 7 which corresponds to the spatial extent of the corresponding graphic 8.

(Lapstun, col. 7, ll. 38-53) (emphasis added).

Therefore, it is clear that Lapstun simply teaches that a ***printed*** netpage includes graphic data printed on the netpage as visible elements and coded data printed on the netpage as invisible elements, but is silent as to how the graphic data and coded data are electronically stored or otherwise brought together within the printed netpage.

Respectfully, to anticipate a claim, a reference must teach each and every element of the claim, and "the identical invention must be shown ***in as complete detail as contained in the ... claim***." MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, "[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements 'arranged as in the claim.'" *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim. Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claim 15, the rejection of claim 15 and its dependent claims should not be sustained.

Claim 32:

Claim 32 recites:

A system for producing an electronic document, the system comprising:
means for receiving the content of the electronic document,
means for receiving data defining a pattern of positional markings allocated to at least a portion of the document; and
means for generating a data structure defining the electronic document which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern.
(Emphasis added).

In contrast, Lapstun does not teach or suggest the subject matter of claim 32. As an initial matter, the final Office Action argues, and the Examiner's Answer reiterates that, "it is noted that the features upon which applicant relies (i.e., "creating a single data file") are not recited in the rejected claim 32." (Examiner's Answer, p. 15) (*See also*, final Office Action, p. 10). However, Appellant respectfully disagrees. Claim 32 recites, "means for generating ***a data structure defining the electronic document*** which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern." This recitation clearly indicates the creation of a single electronic document comprising first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern. In other words, claim 32, although not stating in identical terms as compared to claim 15 and 33, claims creating a single data file.

Further, as similarly argued above in connection with the patentability of independent claims 15 and 33, Lapstun does not teach or suggest, "***means for generating a data structure defining the electronic document which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern***." (Claim 32) (emphasis added). Again, the Examiner's Answer

argues, "as discussed above, Lapstun teaches the page instance 830 (mapped to the claimed "data structure") comprise first and second portions of data and therefore anticipated the claimed limitation." (Examiner's Answer, p. 15) (emphasis added).

The Examiner's Answer further argues:

> Lapstun generates a page instance 830 ***which comprises graphic data and coded data*** before sending to the printer to output the paper document containing both data. Lapstun's page instance therefore corresponds to the claimed "single data file" with the first and second data portions being embedded within the data file as claimed.

(Examiner's Answer, p. 14) (emphasis added).

However, Appellant disagrees and asserts that this portion of Lapstun (i.e., col. 14, ll. 11-67) teaches only aspects of the document, and is silent regarding creating an electronic file and storing in that file data and metadata, the metadata relating to a pattern of position identification markings. Column 14, lines 11-67 of Lapstun generally teaches "document and page descriptions." (Lapstun, col. 14, ll. 8-10).

Throughout column 14, lines 11-67, Lapstun simply teaches the graphic data (Fig. 1, element 2) of the netpage printed using visible ink and does not teach data relating to a pattern of position identification markings. This is clear from the teachings of a "document 836," a "formatted document 834," a "document instance 831," a "page instance 830," and a "terminal elements 839." (Lapstun, col. 14, ll. 11-67). Specifically, Lapstun teaches the following:

> A ***formatted document 834 consists of a set of formatted page descriptions 5, each of which consists of a set of formatted terminal elements 835***. Each formatted element has a spatial extent or zone 58 on the page. This defines the active area of input elements such as hyperlinks and input fields.
>
> ***A document instance 831 . . . consists of a set of page instances 830, each of which corresponds to a page description 5 of the formatted document***. Each page instance 830 describes a single unique printed netpage 1, and ***records the page ID 50*** of the netpage.
>
> A page instance consists of a set of terminal element instances 832.
>
> . . .

> ***A terminal element can be a static element 843, a hyperlink element 844, a field element 845 or a page server command element 846***, as shown in FIG. 27. A static element 843 can be ***a style element 847 with an associated style object 854, a textflow element 848 with an associated styled text object 855, an image element 849 with an associated image element 856, a graphic element 850 with an associated graphic object 857, a video clip element 851 with an associated video clip object 858, an audio clip element 852 with an associated audio clip object 859, or a script element 853 with an associated script object 860***, as shown in FIG. 28.

(Lapstun, col. 14, ll. 36-67) (emphasis added).

Clearly, this portion of Lapstun simply describes the physical look of a printed netpage. Within the above-cited portion of Lapstun, Appellant points out, specifically, that Lapstun teaches "[a] document instance 831 . . . consists of a set of page instances 830, ***each of which corresponds to a page description 5 of the formatted document***." This reference to Fig. 1, element 5 of Lapstun is clearly directed to ***only*** element 2 of Fig. 1 and not elements 3 or 4 of Fig. 1.

Further, with regard to the teaching of recording the page ID 50 within the above-cited portion of Lapstun, Lapstun, in contrast, particularly teaches that the page ID is assigned to "allow input through otherwise identical pages to be distinguished, "and "has sufficient precision to distinguish between a very large number of netpages." (Lapstun, col. 9, ll. 57-60) (*See also*, Fig, 25, element 50, depicting element 50 as a part of the page instance and not a tag, position mark, etc.). In other words, the page ID 50 of Lapstun simply identifies a particular page within a set of pages, and does not comprise a second portion of data relating to a pattern of position identification markings.

Even still further, the Examiner's Answer argues, "each netpage is the printed copy of the page instance 830, and includes [a] first portion (element 2 of Fig. 1) of data defin[ing] content of the document and [a] second portion (element 3,4 of Fig. 1) compris[ing] data relating to a pattern of position identification markings as claimed. (Examiner's Answer, p.

13). However, as demonstrated above, although Lapstun does depict a single printed document comprising content elements and coded data, it does not follow that Lapstun teaches these two elements are included within a single electronic file. This subject matter is simply not taught or suggested by Lapstun.

Further, even if, *arguendo*, the cited portions of Lapstun teach graphic data and coded data, Lapstun still fails to teach or suggest how the graphic data and coded data are electronically stored or otherwise brought together within a single electronic file. Lapstun simply teaches the following:

> As illustrated in FIG. 1, a ***printed netpage*** 1 can represent a interactive form which can be filled in by the user both physically, on the printed page, and "electronically", via communication between the pen and the netpage system. The example shows a "Request" form containing name and address fields and a submit button. ***The netpage consists of graphic data 2 printed using visible ink, and coded data 3 printed as a collection of tags 4 using invisible ink. The corresponding page description 5, stored on the netpage network, describes the individual elements of the netpage. In particular it describes the type and spatial extent (zone) of each interactive element (i.e. text field or button in the example), to allow the netpage system to correctly interpret input via the netpage***. The submit button 6, for example, has a zone 7 which corresponds to the spatial extent of the corresponding graphic 8.

(Lapstun, col. 7, ll. 38-53) (emphasis added).

Therefore, it is clear that Lapstun simply teaches that a ***printed*** netpage includes graphic data printed on the netpage as visible elements and coded data printed on the netpage as invisible elements, but is silent as to how the graphic data and coded data are electronically stored or otherwise brought together within the printed netpage.

Respectfully, to anticipate a claim, a reference must teach each and every element of the claim, and "the identical invention must be shown ***in as complete detail as contained in the ... claim***." MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, "[t]he prior art reference—in

order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements 'arranged as in the claim.'" *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim. Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claim 32, the rejection of claim 32 should not be sustained.

Claim 33:

Claim 33 recites:

> A method for generating an electronic document comprising ***creating an electronic file and storing in that file data and metadata, the data defining at least some content and the metadata relating to a pattern of position identification markings*** arranged to allow a pattern reading device to determine its position within the position identification markings, the electronic file capable of generating an electronic document.

(Emphasis added).

In contrast, Lapstun does not teach or suggest the subject matter of claim 33. As similarly argued above in connection with the patentability of independent claim 15, Lapstun does not teach or suggest, "creating ***an electronic file*** and storing in that file ***data and metadata***, the data defining at least some content and ***the metadata relating to a pattern of position identification markings***." (Claim 33) (emphasis added). Again, the Examiner's Answer argues:

> Lapstun clearly teaches at Col. 14 lines 11-67 the **page instance** 830 (i.e. "**single data file**"), which consists of "a set of terminal element instance" and the "Page ID 50" ***encoded in tags***. Lapstun further teaches: "each page instance 830 describes a single unique printed netpage 1, and record the page

> ID 50 of the netpage" at Col. 14 lines 45-46.

(Examiner's Answer, p. 13) (emphasis added).

The Examiner's Answer further argues:

> Lapstun generates a page instance 830 ***which comprises graphic data and coded data*** before sending to the printer to output the paper document containing both data. Lapstun's page instance therefore corresponds to the claimed "single data file" with the first and second data portions being embedded within the data file as claimed.

(Examiner's Answer, p. 14) (emphasis added).

However, Appellant disagrees and asserts that this portion of Lapstun (i.e., col. 14, ll. 11-67) teaches only aspects of the document, and is silent regarding creating an electronic file and storing in that file data and metadata, the metadata relating to a pattern of position identification markings. Column 14, lines 11-67 of Lapstun generally teaches "document and page descriptions." (Lapstun, col. 14, ll. 8-10).

Throughout column 14, lines 11-67, Lapstun simply teaches the graphic data (Fig. 1, element 2) of the netpage printed using visible ink and does not teach data relating to a pattern of position identification markings. This is clear from the teachings of a "document 836," a "formatted document 834," a "document instance 831," a "page instance 830," and a "terminal elements 839." (Lapstun, col. 14, ll. 11-67). Specifically, Lapstun teaches the following:

> A ***formatted document 834 consists of a set of formatted page descriptions 5, each of which consists of a set of formatted terminal elements 835***. Each formatted element has a spatial extent or zone 58 on the page. This defines the active area of input elements such as hyperlinks and input fields.
>
> ***A document instance 831 . . . consists of a set of page instances 830, each of which corresponds to a page description 5 of the formatted document***. Each page instance 830 describes a single unique printed netpage 1, and ***records the page ID 50*** of the netpage.
>
> A page instance consists of a set of terminal element instances 832.
>
> . . .
>
> ***A terminal element can be a static element 843, a hyperlink element 844, a field element 845 or a page server command element 846***, as shown in FIG. 27. A static element 843 can be ***a style element 847 with an***

> ***associated style object 854, a textflow element 848 with an associated styled text object 855, an image element 849 with an associated image element 856, a graphic element 850 with an associated graphic object 857, a video clip element 851 with an associated video clip object 858, an audio clip element 852 with an associated audio clip object 859, or a script element 853 with an associated script object 860***, as shown in FIG. 28.

(Lapstun, col. 14, ll. 36-67) (emphasis added).

Clearly, this portion of Lapstun simply describes the physical look of a printed netpage. Within the above-cited portion of Lapstun, Appellant points out, specifically, that Lapstun teaches, "[a] document instance 831 . . . consists of a set of page instances 830, ***each of which corresponds to a page description 5 of the formatted document***." This reference to Fig. 1, element 5 of Lapstun is clearly directed to ***only*** element 2 of Fig. 1 and not elements 3 or 4 of Fig. 1.

Further, with regard to the teaching of recording the page ID 50 within the above-cited portion of Lapstun, Lapstun, in contrast, particularly teaches that the page ID is assigned to "allow input through otherwise identical pages to be distinguished, "and "has sufficient precision to distinguish between a very large number of netpages." (Lapstun, col. 9, ll. 57-60) (*See also*, Fig, 25, element 50, depicting element 50 as a part of the page instance and not a tag, position mark, etc.). In other words, the page ID 50 of Lapstun simply identifies a particular page within a set of pages, and does not comprise metadata relating to a pattern of position identification markings.

Even still further, the Examiner's Answer argues, "each netpage is the printed copy of the page instance 830, and includes [a] first portion (element 2 of Fig. 1) of data defin[ing] content of the document and [a] second portion (element 3,4 of Fig. 1) compris[ing] data relating to a pattern of position identification markings as claimed. (Examiner's Answer, p. 13). However, as demonstrated above, although Lapstun does depict a single printed document comprising content elements and coded data, it does not follow that Lapstun

teaches these two elements are included within a single electronic file. This subject matter is simply not taught or suggested by Lapstun.

Further, even if, *arguendo*, the cited portions of Lapstun teach graphic data and coded data, Lapstun still fails to teach or suggest how the graphic data and coded data are electronically stored or otherwise brought together within a single data file. Lapstun simply teaches the following:

> As illustrated in FIG. 1, a ***printed netpage*** 1 can represent a interactive form which can be filled in by the user both physically, on the printed page, and "electronically", via communication between the pen and the netpage system. The example shows a "Request" form containing name and address fields and a submit button. ***The netpage consists of graphic data 2 printed using visible ink, and coded data 3 printed as a collection of tags 4 using invisible ink. The corresponding page description 5, stored on the netpage network, describes the individual elements of the netpage. In particular it describes the type and spatial extent (zone) of each interactive element (i.e. text field or button in the example), to allow the netpage system to correctly interpret input via the netpage***. The submit button 6, for example, has a zone 7 which corresponds to the spatial extent of the corresponding graphic 8.

(Lapstun, col. 7, ll. 38-53) (emphasis added).

Therefore, it is clear that Lapstun simply teaches that a ***printed*** netpage includes graphic data printed on the netpage as visible elements and coded data printed on the netpage as invisible elements, but is silent as to how the graphic data and coded data are electronically stored or otherwise brought together within the printed netpage.

Respectfully, to anticipate a claim, a reference must teach each and every element of the claim, and "the identical invention must be shown ***in as complete detail as contained in the ... claim***." MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, "[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements 'arranged as in

the claim.'" *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim. Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claim 33, the rejection of claim 33 and its dependent claims should not be sustained.

Additionally, various dependent claims of the application recite subject matter that is further patentable over the cited prior art. Specific, non-exclusive examples follow.

Claims 17 and 18:

Claim 17 recites: "[t]he computer program product of claim 15 in which the second portion of data comprises metadata and ***in which the computer usable program code includes one or more controls which control the way in which the second portion of data is converted between formats to preserve the pattern***." (Emphasis added). Claim 18 similarly recites: "[t]he computer program product of claim 16 in which the second portion of data comprises metadata and ***in which the computer usable program code includes one or more controls which control the way in which the second portion of data is converted between formats to preserve the pattern***. (Emphasis added).

In contrast, Lapstun does not teach or suggest, "in which the computer usable program code includes one or more controls which control the way in which the second portion of data is converted between formats to preserve the pattern." In the first instance, in light of the above arguments presented above in favor of the patentability of independent claim 15 it is

clear that Lapstun does not teach or suggest providing ***a single data file*** that includes content of the electronic document ***and*** data relating to a pattern of position identification markings.

Further, although the Examiner's Answer asserts that the recitations of claims 17 and 18 are taught at column 11, lines 20-65 and column 31, lines 25-50, this is incorrect. (Examiner's Answer, p. 15). Column 11, lines 20-65 discuss generally the physical structure of the tags of Lapstun as they existed printed on a piece of medium. This portion of Lapstun is silent on conversion of any data between formats.

The Examiner's Answer then cites to column 31, lines 25-50 of Lapstun. This portion of Lapstun teaches, "[w]hen a non-netpage document is requested on demand, it is not personalized, and it is delivered via a designated netpage formatting server which reformats it as a netpage document." (Lapstun, col. 31, ll. 30-33). It is clear that ***only the document*** of Lapstun is being converted from one format to another. However, Lapstun is silent on converting a second portion of data comprising metadata from one format to another.

Again, to anticipate a claim, a reference must teach each and every element of the claim, and "the identical invention must be shown ***in as complete detail as contained in the ... claim***." MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, "[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements 'arranged as in the claim.'" *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim.

Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claims 17 and 18, the rejection of claims 17 and 18, and their respective dependent claims should not be sustained.

Claims 19 through 22:

Claim 19 recites, "[t]he computer program product of claim 15 in which the data in the second portion comprises any one or more of the following: ***data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking***." (Emphasis added). Claims 20 through 22 contain similar subject matter. In contrast, Lapstun does not teach or suggest "in which the data in the second portion comprises any one or more of the following: data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking." (Claims 19 through 22). In rejecting claims 19 through 22, the Examiner's Answer cites to column 12, lines 10-65.

Applicant notes that this portion of Lapstun generally discloses the use of a netpage pen in detecting, processing, and decoding tags within a document ***after*** the tags have been printed to a medium. In other words, this portion of Lapstun simply teaches the use of a netpage pen in imaging the tags and does not discuss data from which an algorithm can generate the pattern or co-ordinates or other metadata identifying the portion of the position identification marking. Thus, this portion of Lapstun simply does not disclose the recitations of claims 19 through 22.

The Examiner's Answer argues:

> Lapstun teaches at Col. 12 lines 10-16 that each of the ***tag (i.e. "data in the second portion"***) is encoded with data which is used to identifying the portion of the position identification marking (i.e. scale, aspect ration,

> rotation, axis, spatial relationship, distortion etc.") Lapstun therefore teaches that the second portion comprise "other metadata identifying the portion of the position identification marking as claimed.

(Examiner's Answer, p. 16) (emphasis added).

Appellant points out that the tags of Lapstun cannot be analogous to the data in the second portion because these tags are physical manifestations printed on a piece of paper. Thus, it is impossible for the tags of column 12, lines 10-16 of Lapstun to include data or metadata of any kind.

Further, Appellant asserts that Lapstun is silent with regard to "data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking." (Claims 19 through 22). Lapstun teaches tags that indentify the page description and the tag's own position on a page. However, nowhere does Lapstun teach or suggest data from which an algorithm can generate a pattern or co-ordinates or other metadata identifying the portion of the position identification marking.

In contrast, claims 19 through 22 recite: "in which the data in the second portion comprises any one or more of the following: data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking." This subject matter is simply not taught or suggested by Lapstun.

Again, to anticipate a claim, a reference must teach each and every element of the claim, and "the identical invention must be shown ***in as complete detail as contained in the ... claim***." MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, "[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements 'arranged as in

the claim.'" *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim. Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claims 19 through 22, the rejection of claims 19 through 22, and their respective dependent claims should not be sustained.

(3) Claims 23-30 are patentable over *Lapstun* and *Ethier*:

Claims 23 through 30:

Claim 23 recites, "[t]he computer program product of claim 15 ***in which the second portion of data is provided in XML***." (Emphasis added). Claims 24 through 30 contain similar subject matter.

The Examiner's Answer uses impermissible hindsight in reconstructing the recitations of claims 23 through 30. The final Office Action concedes, "[Lapstun] does not teach 'the second portion of data is provided in XML.'" (Examiner's Answer, p. 10). Thus, the Examiner's Answer cites to Ethier, and argues:

> [I]t would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Ethier with Lapstun so that 'the document can be transformed back and forth between a binary format and a markup language format without loss of desired information' as suggested by Ethier at Col. 4 lines 58-65.

(Examiner's Answer, p. 10).

However, this is incorrect. Lapstun and Ethier all relate to different arts and classes of invention. Lapstun pertains to methods and devices for coding and for recording of

information from a surface. (*See*, Lapstun, Abstract). Ethier is directed to systems and techniques to create and use a reversible format document. Further, both cited prior art references are classified under different international and U.S. classes of invention.

Still further, these prior art references clearly have distinct differences in function and structure. The product of Lapstun is structurally and functionally different from the reversible document format of Ethier in that the former is a physical document that functions to record information written in the document whereas the latter is embodied in code only and simply functions to convert a portion of the electronic document from one format to another. In fact, ***the only similarity*** between Lapstun and Ethier is that in some embodiments, the inventions, or products resultant from the application of methods taught therein relate to computer processing of data. Appellant respectfully asserts that these prior art references' respective arts are too attenuated to be considered "analogous." Appellant points out that "while Patent Office classification of references and the cross-references in the official search notes of the class definitions are some evidence of 'nonanalogy' or 'analogy' respectively, the court has found 'the similarities and differences in structure and function of the inventions to carry far greater weight.' *In re Ellis*, 476 F.2d 1370, 1372, 177 USPQ 526, 527 (CCPA 1973)." (MPEP § 2141.01(a)).

In response to the above arguments, the Examiner's Answer argues:

> [I]t must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, ***and does not include knowledge gleaned only from the applicant's disclosure***, such a reconstruction is proper. See In re McLaughlin, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

(Examiner's Answer, p. 16) (emphasis added).

Appellant respectfully asserts that the Examiner's Answer relies on knowledge gleaned from Appellant's specification; namely, a second portion of data (comprising "data relating to a pattern of position identification markings" (Claim 15)) is provided in XML.

In light of the above, it is clear that the final Office Action has failed to provide a sufficient rational underpinning for combining Lapstun and Ethier. Without some reason in the references to combine the cited prior art teachings, with some rational underpinnings for such a reason, the Examiner's conclusory statements in support of the alleged combination fail to establish a prima facie case for obviousness. *See, KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007) (obviousness determination requires looking at "whether there was an apparent reason to combine the known elements in the fashion claimed…," *citing In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness," *KSR* at 14).

Further, "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Still further, "it is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780, (Fed. Cir. 1992). Therefore, because the final Office Action employs impermissible hindsight in combining the nonanalogous prior art references of Lapstun and Ethier, the rejection of claims 23 through 30 should not be sustained.

In view of the foregoing, it is submitted that the final rejection of the pending claims is improper and should not be sustained. Therefore, a reversal of the Rejection of April 19, 2010 is respectfully requested.

Respectfully submitted,

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